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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,604	04/26/2001	Haixiang He	2494/105	8615
34645	7590	06/08/2005	EXAMINER	
JOHN C. GORECKI, ESQ. 180 HEMLOCK HILL ROAD CARLISLE, MA 01741			NGUYEN, HAI V	
			ART UNIT	PAPER NUMBER
			2142	

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Interview Summary</b>	Application No.	Applicant(s)
	09/842,604	HE, HAI XIANG
	Examiner Hai V. Nguyen	Art Unit 2142

All participants (applicant, applicant's representative, PTO personnel):

(1) Hai V. Nguyen, USPTO Examiner. (3) Ms. Beatriz Prieto, USPTO Examiner.  
 (2) Mr. John G, Applicant's Agent #: 38,471. (4) \_\_\_\_\_

Date of Interview: 02 June 2005.

Type: a) Telephonic b) Video Conference  
 c) Personal [copy given to: 1) applicant 2) applicant's representative]

Exhibit shown or demonstration conducted: d) Yes e) No.  
 If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: 1,10,18 and 26.

Identification of prior art discussed: Haggerty et al. US patent # 6,331,987 B1 and Cheng et al. prov. appl. pub #: 60/243,809.

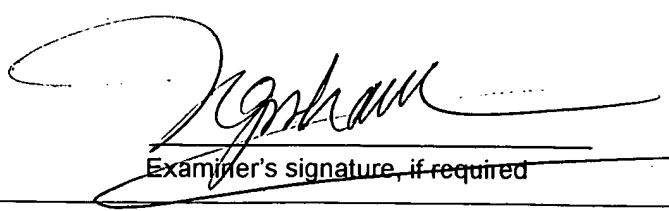
Agreement with respect to the claims f) was reached. g) was not reached. h) N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

  
 Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant's Representative discusses the USC 101 rejection regarding to the terms "apparatus" and "module" and Examiner agrees to withdraw the USC 101 rejection. Applicant's representative also discusses the USC 103 rejection regarding to the references, Haggerty and Cheng. Applicant's Representative agrees to amend the claim language in claims 1, 10, 18, and 26 in order to overcome those prior art. However, Examiner indicates that he will update the search and give further consideration with the amended claims.

*Beatriz Prieto*  
BEATRIZ PRIETO  
PRIMARY EXAMINER

*fm*

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**FACSIMILE TRANSMITTAL**

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To: Examiner H. Nguyen

Fax. No.: 571-273-3901

Tel. No.: 571-272-3901

From: John C. Gorecki

Date: May 17, 2005

**Re: Request For Interview**

Total number of pages (including this page): 4

Hi Examiner Nguyen. Thank you for taking time to talk with me this afternoon. Per your suggestion, I put together a proposed agenda listing the several items I would like to discuss with you. For your convenience, I also included a copy of the independent claims as they currently stand. Please call me to set up a time to discuss this application once you have had a chance to look things over. I am currently available to discuss this case any time next week.

I look forward to talking with you about this application. If you have any questions, please feel free to call me.

Regards, John

The Document(s) accompanying this Facsimile Transmission contains information that is confidential and/or legally privileged. This information is intended only for the use of the individual or entity named on the Transmission Sheet. If you are not an intended recipient, you are hereby notified that any disclosure, copying, distribution, or the taking of any action in reliance on the contents of this faxed information is strictly prohibited and the Document(s) should be returned to John C. Gorecki, immediately. If you have received the facsimile in error, please notify us by telephone immediately, so that we can arrange for the return of the original Document(s) at no cost to you.

Applicant: Haixiang He Examiner: H. Nguyen  
Serial No.: 09/842,604 Art Unit: 2142  
Filed: April 26, 2001 Attorney Docket No.: 13774BAUS01U  
Title: METHOD AND APPARATUS FOR PRODUCING A MULTICAST TREE

### AGENDA

Item 1: Section 101 rejection with respect to claim 10 – Apparatus claim having modules configured to perform particular functions. The claim language does not appear to me to recite software devoid of a computer readable medium – the term “apparatus” in preamble and term “module” in both limitations would seem to provide sufficient structure.

Item 2: Section 101 rejection with respect to claim 26 – Claim is written in means-plus-function format. This format, by statute, allows the claim to merely recite the function performed by the structure disclosed in the specification. Since the specification teaches that the function can be performed by computer code on a disk (Specification at page 12, line 22 through page 13, line 28), it would seem that the claim incorporates this structure implicitly.

Item 3: Section 103 rejection over Haggerty in view of Chang

- o Haggerty teaches an alternative to PIM or DVMRP that will allow multicasting to extend across a switched, rather than routed, network.
- o Chang teaches an alternative to PIM or DVMRP that will allow multicasting to operate in an hierarchical network.
- o Both references cause the routers and switches to store multicast routing information in a database in a manner specific to their proposed protocol. Neither reference teaches that the network elements should store data in a protocol independent manner, such that an application that is configured to use PIM can access a multicast tree that was set up using DVMRP or vice versa.
- o Since Chang says that his system only works for hierarchical networks (Page 2 “Although HLIM is designed for hierarchical tactical networks, it could be applied to any other commercial networks arranged in a hierarchical manner”) and relies on the hierarchical nature of the network to define how network elements communicate, it would not be obvious to use parts of Chang in a non-hierarchical network such as the network of Haggerty.

Amendment Dated May 19, 2005  
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CURRENTLY PENDING INDEPENDENT CLAIMS

Claim 1. (Original) A method of producing a multicast tree for a multicast in a network, the network including a plurality of network devices that are members of the multicast, a set of the network devices each including a multicast database that is protocol independent, the method comprising:

locating the multicast database within each of the set of the network devices;  
retrieving multicast information from each located multicast database; and  
tracing the retrieved multicast information across the plurality of network devices to form the multicast tree.

Claim 10. (Previously Presented) An apparatus for producing a multicast tree for a multicast in a network, the network including a plurality of network devices that are members of the multicast, a set of the network devices each including a multicast database that is protocol independent, the apparatus comprising:

a multicast database processing module, the multicast database processing module being capable of locating the multicast database within each of the set of the network devices, the multicast database processing module also being capable of retrieving multicast information from each located multicast database; and

a tracing module operably coupled with the multicast database processing module, the tracing module being capable of tracing the retrieved multicast information across the plurality of network devices to form the multicast tree.

Claim 18. (Original) A computer program product for use on a computer system for producing a multicast tree for a multicast in a network, the network including a plurality of network devices that are members of the multicast, a set of the network devices each including a multicast database that is protocol independent, the computer program product comprising a computer usable medium having computer readable program code thereon, the computer readable program code comprising:

program code for locating the multicast database within each of the set of the network devices,

program code for retrieving multicast information from each located multicast database;  
and

Amendment Dated May 19, 2005  
Serial No. 09/842,604

program code for tracing the retrieved multicast information across the plurality of network devices to form the multicast tree.

Claim 26. (Original) An apparatus for producing a multicast tree for a multicast in a network, the network including a plurality of network devices that are members of the multicast, a set of the network devices each including a multicast database that is protocol independent, the apparatus comprising:

means for locating the multicast database within each of the set of the network devices,  
means for retrieving multicast information from each located multicast database; and  
means for tracing the retrieved multicast information across the plurality of network devices to form the multicast tree.